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Predicting hurricanes years ahead

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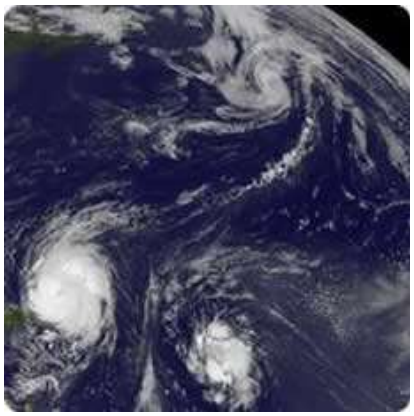

A major breakthrough in forecasting the number of Atlantic tropical storms has been achieved, say Met Office scientists.

New research, published on *Nature Geoscience* web site today, reveals that the Decadal Climate Prediction System (DePreSys), developed at the Met Office, extends successful storm activity forecasts beyond the current season, providing predictions years ahead.

“Being able to predict hurricane frequency well beyond the seasonal timescale represents a real step-change in capability”, said Matt Huddleston, Principle Climate Consultant at the Met Office. “Tropical storms present arguably the most destructive weather on the planet. Being able to reliably predict how many storms may occur over a number of years means increased confidence in making strategic plans. Armed with such information, financial and energy sectors will have a genuine advantage.”

There is a strong link between the environmental factors in the tropical Atlantic that affect hurricane formation and remote ocean conditions in the north Atlantic and the tropical Pacific. Doug Smith, the paper’s lead author and Met Office specialist in decadal forecasting, said: “Our study is important for understanding the mechanisms of multi-year hurricane variability, and shows that forecasting hurricane activity beyond a single year is viable using dynamical computer models.”

The study has also examined the recent increase in Atlantic hurricane activity and concluded this was not exclusively linked to natural fluctuations of ocean temperature. Looking forward, Dr Smith said: “This opens the door for further research to determine the relative importance of the different factors, be these greenhouse gases, aerosols, volcanic eruptions or solar activity.”

Nature Geoscience: Skilful multi-year predictions of Atlantic hurricane frequency

Notes for editors

- *“Skilful multi-year predictions of Atlantic hurricane frequency”* has been scheduled for Advance Online Publication (AOP) on *Nature Geoscience*'s website on 07 Nov 2010 at 1800 GMT at which time the embargo will lift.
- The full author list is Doug M. Smith, Rosie Eade, Nick J. Dunstone, David Fereday, James M. Murphy, Holger Pohlmann and Adam A. Scaife, all of the Met Office.
- This work was supported by the Joint DECC and Defra Integrated Climate Programme and by the EU ENSEMBLES project.

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